

NOTE ON THE PERIOD OF GESTATION IN *ECHIDNA*.

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On 5th September I had brought me an adult male and female *Echidna*, which had been found together. There was no egg or young one about the female, and little indication of even the pouch. Considering it probable that impregnation had taken place, I resolved to keep the specimens alive and await developments. The two were placed together in a large box that their behaviour might be noted; but they appeared to have no interest in each other. The male was rather inactive, and unless disturbed, for the most part remained quietly in the bottom of the box. The female, on the other hand, was most persistent in its bids for liberty, and twice succeeded in escaping; on one occasion splitting a $\frac{3}{8}$ -in board and wrenching out three nails. Fortunately, on both occasions, it was recaptured. The male, which absolutely refused to take either food or drink, died on the 18th of the month. The female continued to be apparently in the best of health. Occasionally it would take a little milk or water, but curiously enough refused ants; and when placed on an ant bed its only desire seemed to be burrow. In fact it was this unusually great desire to burrow that led to its capture on the two occasions it escaped.

On the 2nd October, on taking the *Echidna* out of the box, I found that it had developed a well marked pouch, and that in it had been placed at its most posterior part an egg. Though well protected by the lateral folds of the pouch, the egg seemed chiefly secured by the long hairs plastered across it. Among the straw was found a second egg, apparently discarded. As there was no signs of any egg on 30th September, it is probable that one egg was laid on the 1st October and the other on the 2nd. After protecting the pouch egg safely for three days, the mother seems to have removed it, as the torn egg membrane or "shell" was found on the bottom of the box, the contents having been presumably sucked.

Though the female thus disappointed me in my hope of finding accurately the period of incubation, it enabled me to arrive at an approximate idea of the period of gestation. The evidence on this point would have been more conclusive had the sexes been kept apart, but as the male died on the 18th, and was in a very low condition for some days previously, impregnation could not well have taken place later than the 12th, and as during the period of captivity neither appeared to have any interest in the other except to use the body of its companion as a stepping stone while endeavouring to climb out of the box, it seems highly probable that impregnation had taken place when the specimens were captured. If this be so, the period of gestation would be about 26 or 27 days, and even if this were not so, as impregnation could not well have taken place later than the 12th, the period of gestation could not be less than 18 or 19 days.

The eggs of my specimen appeared considerably paler than that figured by Semon,* being of a light cream colour. The unbroken egg measured 14 mm. in its long axis, and about 12·5 mm. across.

I must express my thanks to Prof. Wilson for having had an opportunity of seeing Semon's work.

ADDENDUM (7th Feb., 1896).—I have recently had an opportunity of seeing the person who first observed the two *Echidnas* referred to above—Mr. Angus McInnis. He states that the two were lying together on a slight hollow at the root of a tree, and so far as he could observe front to front, but as on his near approach the two separated and endeavoured to escape, he could not be certain of their exact positions before being disturbed. He, however, assures me that on picking up the male its copulatory organ was protruding about a couple of inches; so that there can be little or no doubt but coitus had just taken place. This, he further states, was on the day previous to my getting them, or 4th September. This additional information removes the previous uncertainty, and enables us to fix the period of gestation at about 28 days.

* R. Semon. "Zool. Forschungsreisen in Australien u.d. Malay. Archipel. Band ii.; Monotremen und Marsupialier." Jena 1894.